e. Arboricultural report/survey by Landmark Trees

Landmark Trees

TREE CONSTRAINTS REPORT:

30 Ferncroft Avenue

London

NW3 7PH

REPORT PREPARED FOR:

Rose Uniacke Studio Ltd

76-84 Pimlico Road

London

SW1W 8PL

REPORT PREPARED BY

Adam Hollis

MSc ARB MICFor FArbor A MRICS C Env

Ref: RUS/30FCT/TCR/01

Date: 7th April 2020

Appendices

Caveats

This report is primarily an arboricultural report. Whilst comments relating to matters involving built structures or soil data may appear, any opinion thus expressed should be viewed as qualified, and confirmation from an appropriately qualified professional sought. Such points are usually clearly identified within the body of the report. It is not a full safety survey or subsidence risk assessment survey. These services can be provided but a further fee would be payable. Where matters of tree condition with a safety implication are noted during a survey they will of course appear in the report.

A tree survey is generally considered invalid in planning terms after 2 years, but changes in tree condition may occur at any time, particularly after acute (e.g. storm events) or prolonged (e.g. drought) environmental stresses or injuries (e.g. root severance). Routine surveys at different times of the year and within two - three years of each other (subject to the incidence of the above stresses) are recommended for the health and safety management of trees remote from highways or busy access routes. Annual surveys are recommended for the latter.

Tree works recommendations are found in the Appendices to this report. It is assumed, unless otherwise stated ("ASAP" or "Option to") that all husbandry recommendations will be carried out within 6 months of the report's first issue. Clearly, works required to facilitate development will not be required if the application is shelved or refused. However, necessary husbandry work should not be shelved with the application and should be brought to the attention of the person responsible, by the applicant, if different. Under the Occupiers Liability Act of 1957, the owner (or his agent) of a tree is charged with the due care of protecting persons and property from foreseeable damage and injury.' He is responsible for damage and/or nuisance arising from all parts of the tree, including roots and branches, regardless of the property on which they occur. He also has a duty under The Health and Safety at Work Act 1974 to provide a safe place of work, during construction. Tree works should only be carried out with local authority consent, where applicable.

Inherent in a tree survey is assessment of the risk associated with trees close to people and their property. Most human activities involve a degree of risk, such risks being commonly accepted if the associated benefits are perceived to be commensurate.

Risks associated with trees tend to increase with the age of the trees concerned, but so do many of the benefits. It will be appreciated, and deemed to be accepted by the client, that the formulation of recommendations for all management of trees will be guided by the cost-benefit analysis (in terms of amenity), of tree work that would remove all risk of tree related damage.

Prior to the commencement of any tree works, an ecological assessment of specific trees may be required to ascertain whether protected species (e.g. bats, badgers and invertebrates etc.) may be affected.

1. INTRODUCTION

1.1 Terms of reference

1.1.1	LANDMARK TREES were asked by Rose Uniacke Studio Ltd to undertake an arboricultural planning survey of the site: 30 Ferncroft Avenue, London NW3 7PH. The report is to inform proposals for a planning application.
1.1.2	The site contains a detached dwelling standing in large gardens. It stands within the Redington Frognal Conservation Area which will affect the subject trees: it is a criminal offence to prune, damage or fell such trees without permission from the local authority.
1.1.3	I am a Registered Consultant and Fellow of the Arboricultural Association and a Chartered Forester, with a Masters Degree in Arboriculture and 20 years experience of the landscape industry - including the Forestry Commission and Agricultural Development and Advisory Service. I am a UK Registered Expert Witness, trained in single joint expert witness duties. I am also Chairman of the UK & I Regional Plant Appraisal Committee, inaugurated to promote international standards of valuation in arboriculture.

1.2 Drawings supplied

1.2.1	The drawing supplied by the client and relied upon Landmark Trees in the formulation of our survey plans are: Existing site survey: 168_Pre App Low Res

*In the absence of a full topographical survey, tree positions may be approximate only.

1.3 Scope of survey

1.3.1 As Landmark Trees' (LT) arboricultural consultant, I surveyed the trees on site on the 3rd of April 2020, recording relevant qualitative data in order to assess both their suitability for retention and their constraints upon the site, in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations [BS5837:2012].

1.3.2 Our survey of the trees, the soils and any other factors, is of a preliminary nature. The trees were SURVEYED on the basis of the Visual Tree Assessment method expounded by Mattheck and Breloer (The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994). LT have not taken any samples for analysis and the trees were not climbed, but inspected from ground level.

1.3.3 A tree survey is generally considered invalid in planning terms after 2 years, but changes in tree condition may occur at any time, particularly after acute (e.g. storm events) or prolonged (e.g. drought) environmental stresses or injuries (e.g. root severance). Routine surveys at different times of the year and within two - three years of each other (subject to the incidence of the above stresses) are recommended for the health and safety management of trees remote from highways or busy access routes. Annual surveys are recommended for the latter.

1.3.4 The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

1.4 Survey data & report layout

1.4.1 Detailed records of individual trees are given in the survey schedule in Appendix 1 to this report.

1.4.2 A site plan identifying the surveyed trees, based on the client's drawings / topographical survey is provided in Appendix 2.

1.4.3 This plan also serves as the Tree Constraints Plan with the theoretical Recommended Protection Areas (RPA's), tree canopies and shade constraints, (from BS5837: 2012) overlain onto it. These constraints can then be overlain in turn onto the client's, forthcoming proposals to create a further Arboricultural Impact Assessment Plan and Report for planning purposes.

2.0 DEVELOPMENT CONSTRAINTS

2.1 Primary Constraints

2.1.1 A tree's primary constraint on development is the physical space it occupies or requires above and below ground on a given site. The current canopy spreads and heights are noted in our survey; allowance for further growth and broader aspects of juxtaposition are considered under secondary impacts below. With regard to root spread, BS5837 defines the Root Protection Area (RPA) as a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

2.1.2 The individual RPA's are calculated in the Tree Schedule in Appendix 1 to this report, or rather the notional radius of that RPA, based on a circular protection zone. The prescribed radius is 12-x stem diameter at 1.5m above ground level, except where composite formulae are used in the case of multi-stemmed trees.

2.1.3 Circular RPA's are appropriate for individual specimen trees grown freely, but where there is ground disturbance, the morphology of the RPA can be modified to an alternative polygon, as shown in the diagram below (Figure 2). Alternatively, one need principally remember that RPA's are area-based and not linear – notional rather than fixed entities.

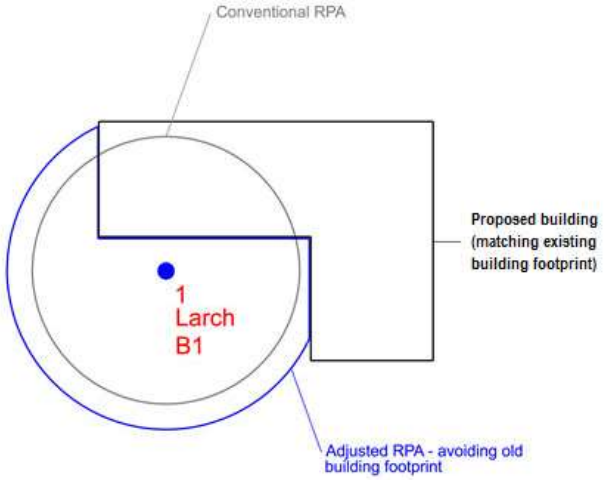

Figure 3– Generic BS 5837 RPA Adjustments (for fictitious site)

2.1.4 In BS5837, paragraph 4.6.2 states that RPA's should reflect the morphology and disposition of the roots; where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.

2.1.5 **No *a priroi* modifications have been made in this instance, though further investigations are recommended, where the proposals encroach / come near RPA and their modification could have a bearing on the impact assessment.**

2.1.6 In addition to these quantitative assessments, the quality of trees will also be a consideration: Category U trees are discounted from the planning process in view of their limited service life. Again, Category C trees would not normally prevent development individually, unless they provide some particular (screening) function. Nonetheless, they remain material constraints.

2.1.7 At paragraph 5.1.1. BS5837: 2012 notes that "Care should be exercised over misplaced tree preservation; attempts to retain too many or unsuitable trees on a site are liable to result in excessive pressure on the trees during demolition or construction work, or post-completion demands on their removal."

2.1.8 Only moderate quality trees and above are significant material constraints on development. However, low quality trees comprise a constraint in aggregate, in terms of any collective loss / removal, where replacement planting is generally considered appropriate.

2.1.9 In this instance, there are few internal site trees, with the majority of these being of low quality, and therefore few significant primary constraints upon development, provided it will not be necessary to build right up to the boundaries.

2.2 Secondary Constraints

2.2.1 The second type of constraint produced by trees that are to be retained is that the proximity of the proposed development to the trees should not threaten their future with ever increasing demands for tree surgery or felling to remove nuisance shading (Figure 3), honeydew deposition or perceived risk of harm.

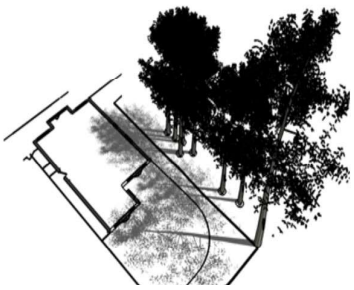

Figure 3 –
Generic Shading Constraints

2.2.2	The shading constraints are crudely determined from BS5837 by drawing an arc from northwest to east of the stem base at a distance equal to the height of the tree, as shown in the diagram opposite. Shade is less of a constraint on non-residential developments, particularly where rooms are only ever temporarily occupied.

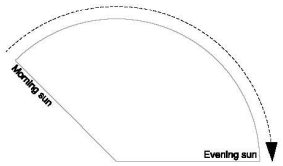

Figure 4 – Shading Arc

2.2.3	This arc (see Figure 4) represents the effects that a tree will have on layout through shade, based on shadow patterns of 1x tree height for a period May to Sept inclusive 10.00-18.00 hrs daily.

2.2.4	Assuming that they will be retained, the orientation of the on- and off-site trees will ensure that shading constraints are minimal, with leaf deposition and honey-dew likely to be as it is today. The significance of these constraints will vary depending on the location and proximity to the proposed re-development which is considered below (in Sections 5 & 6). As specified by BS5837, this section (4) of the report considers only the site as it is, not in the light of pending proposals.

Note: Sections 5 & 6 below will now assess the impacts of the proposals upon constraints identified in Section 4 above. Table 1 in Section 5 presents the impacts in tabular form (drawing upon survey data presented in Appendices 1 & 2). Impacts are presented in terms of whole tree removal and the effect on the landscape or partial encroachment (% of RPA) and its effect on individual tree health. Section 6 discusses the table data, elaborating upon the impacts' significance and mitigation.

3.0 SURVEY FINDINGS AND ARBORICULTURAL IMPLICATIONS

3.1	There are 17 trees on or around the site, 2 of which are assessed as being category* A (High Quality), 8 as being category B (Moderate Quality) and 7 as being category C (Low Quality); none are assessed as being of poor quality / unsuitable for retention.
3.2	Although all trees are material planning considerations, the trees within the application site itself are of lesser value than the street trees immediately adjacent. Whilst the trees internal to the site do provide some level of private amenity, their contribution to the character of the area is not significant. The exception to this would be the larger trees around the periphery of the site such as T4 or T8 although these are unlikely to pose significant constraints to development by virtue of their position.
3.3	The circa 1.5m level change and associated retaining structures between the application site and street trees means that soil within the site is not likely to be a priority area to protect in order to ensure their ongoing viability. Further investigations may be required to confirm this hypothesis.

*page 9 of: British Standards Institute: Trees in relation to design, demolition and construction BS 5837: 2012 HMSO, London

4.0. CONCLUSION

4.1	There are limited arboricultural constraints to the development of the site as a result of the nature and distribution of the tree stock within it.
4.2	The adjacent street trees, which possess the greatest value and significance, are unlikely to be affected by development of the site as it is unlikely to comprise part of the priority area to protect for those trees.
4.3	It is unlikely that further development of the site will lead to conflict between future occupiers and retained trees.

APPENDIX 1

TREE SCHEDULE - Notes for Guidance

Notes for Guidance:

1. Height describes the approximate height of the tree measured in metres from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in metres of crown clearance above adjacent ground level.
4. Stem Diameter (Dm) is the diameter of the stem measured in millimetres at 1.5m from ground level for single stemmed trees. BS 5837:2012 formula (Section 4.6) used to calculate diameter of multi-stemmed trees. Stem Diameter may be estimated where access is restricted and denoted by '#'.
5. Protection Multiplier is 12 and is the number used to calculate the tree's protection radius and area
6. Protection Radius is a radial distance measured from the trunk centre.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat refers to (British Standard 5837:2012 section 4.5) and refers to tree/group quality and value; 'A' – High, 'B' - Moderate, 'C' - Low, 'U' - Unsuitable for retention. The following colouring has been used on the site plans:
    - High Quality (A) (Green),
    - Moderate Quality (B) (Blue),
    - Low Quality (C) (Grey),
    - Unsuitable for Retention (U) (Red)
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservational, Historic and Commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.

Landmark Trees

Site: 30 Ferncroft
Date: 06/04/2020

Appendix 1

BS5837 Tree Constraints Survey Schedule

Landmark Trees Ltd
020 7851 4544
Surveyor(s): Adam Hollis
Ref: RUS_30FCT_TCR

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Stem Diamete	Age Class	Protection Radius	Growth Vitality	Structural Condition	B.S. Cat	Sub Cat	Useful Life	Comments
1	Birch, Silver	14	3213	5.0	180	Semi-mature	2.2	Normal	Good	B	2	20+	
2	Plane, London	12	3.5,2,3,3	7.0	540	Mature	6.5	Normal	Fair	B	2	40+	
3	Maple, Moose bark	7	1334	2.5	250	Early Mature	3.0	Moderate	Fair	C	2	20+	Suppressed by nearby tree Unprofessionally topped/lopped
4	Willow, Corkscrew	11	3334	2.5	390	Early Mature	4.7	Normal	Good	B	2	40+	Restricted rooting
5	Pear, Willow-leaved	5	2333	1.5	170	Semi-mature	2.0	Moderate	Fair	C	2	10+	Bark cracks/ lesions
6	Olive	5	1.5	1.0	120	Semi-mature	1.4	Normal	Good	C	2	20+	

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Date: 06/04/2020

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Tree No.	English Name	Height	Crown Spread	Ground Clearance	Stem Diamete	Age Class	Protection Radius	Growth Vitality	Structural Condition	B.S. Cat	Sub Cat	Useful Life	Comments
7	Cherry, Japanese	4	3234	2.0	180	Early Mature	2.2	Moderate	Fair	C	2	20+	Unprofessionally topped/lopped
8	Birch, Himalayan	11	2424	2.5	190	Semi-mature	2.3	Normal	Good	B	2	40+	
9	Maple, Norway	12	5	5.0	490	Mature	5.9	Normal	Fair	B	2	40+	Remote survey only (RS)
G10	Plum	7	2.5	5.0	150	Semi-mature	1.8			C	2	20+	Remote survey only (RS)
11	Rowan	8	3	5.0	150	Semi-mature	1.8			C	2	20+	Remote survey only (RS)
12	Plane, London	12	3241	7.0	920	Mature	11.0	Normal	Good	A	2	40+	Surface rooting Pollard

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Date: 06/04/2020

Appendix 1

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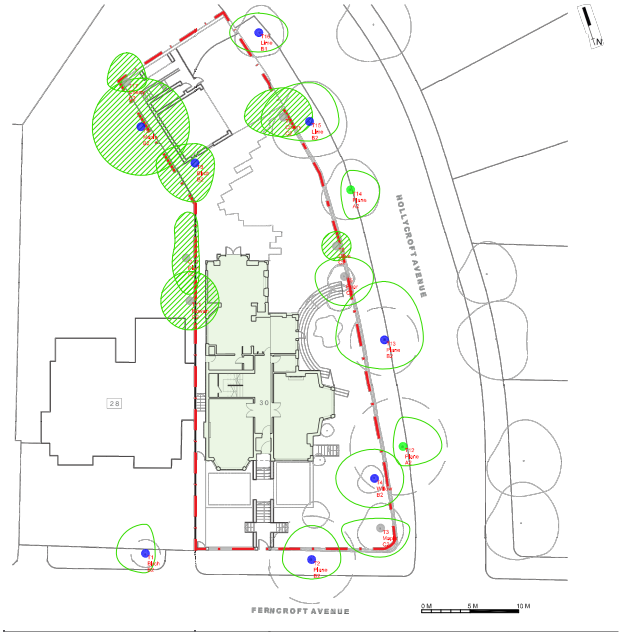
Tree No.	English Name	Height	Crown Spread	Ground Clearance	Stem Diamete	Age Class	Protection Radius	Growth Vitality	Structural Condition	B.S. Cat	Sub Cat	Useful Life	Comments
13	Plane, London	12	6345	5.0	250	Semi-mature	3.0	Normal	Good	B	2	40+	
14	Plane, London	12	2331	7.0	910	Mature	10.9	Normal	Good	A	2	40+	
15	Lime, Common	13	4235	3.0	300	Early Mature	3.6	Normal	Fair	B	2		Surface rooting stem
16	Lime, Common	13	2233	4.0	300	Early Mature	3.6	Normal	Good	B	1	40+	
17	Cherry, Japanese	9	3122	3.0	180	Semi-mature	2.2	Normal	Fair	C	2	20+	

APPENDIX 2

TREE CONSTRAINTS PLAN



NOTE:

This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

Branch spread (in metres to nearest 0.5m) taken at the four cardinal points to derive an accurate representation of the crown.

Root Protection Areas (RPA) are derived from stem diameter measured at 1.5 m above adjacent ground level (taken on sloping ground on the uphill side of the tree base).

Landmark Trees

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e-mail: Info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

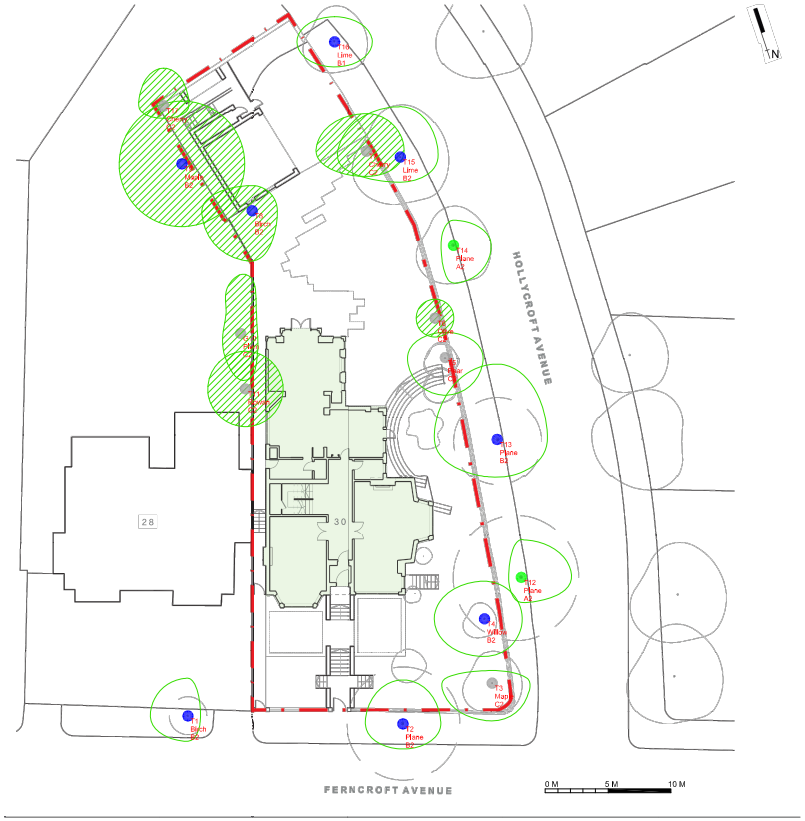
Site: 30 Ferncroft	1:200@ A1
Drawing Title: Tree Constraints Plan	April 2020

Key:

- Category A High Quality
- Category B Moderate Quality
- Category C Low Quality
- Category U Trees Unsuitable for Retention

Category — Crown Spread — Tree Number — Species — Category — Root Protection Area

Tree Position Approximate (not shown on original survey)



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e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: 30 Ferncroft	1:200@ A1
Drawing Title: Tree Constraints Plan	April 2020

Key:

- Category A High Quality
- Category B Moderate Quality
- Category C Low Quality
- Category U Trees Unsuitable for Retention